

Notice of Allowability

Application No.

10/678,534

Applicant(s)

CALDWELL, JOSHUA WILLIAM

Examiner

Art Unit

Gary L. Laxton

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 11/17/04.
2. ☒ The allowed claim(s) is/are 3-14 and 16-21.
3. ☒ The drawings filed on 03 October 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

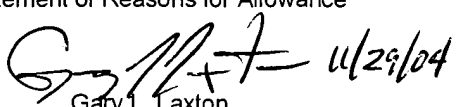
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Gary L. Laxton
Patent Examiner
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DETAILED ACTION

Allowable Subject Matter

1. Claims 3-14 and 16-21 are allowed.

2. The following is an examiner's statement of reasons for allowance:

Claims 3-7; prior art fails to disclose or suggest, inter alia, a voltage regulation circuit using current feedback for regulating an output voltage comprising: a current feedback loop having a voltage to current converter comprising a negative coefficient element and an element configured to cancel the negative temperature coefficient by passing a PTAT current, and a current element coupled to the voltage to current converter to provide a feedback current from the voltage to current converter to compare with a reference current to produce an error signal coupled to a control terminal of the output device; wherein the current feedback loop regulates the voltage at the node of the voltage to current converter.

Claims 8-14; prior art fails to disclose or suggest, inter alia, a circuit having a voltage regulated by a reference current comprising, a reference current source coupled to a control terminal of a transistor and producing the reference current, and an element coupled to a voltage to current converter to provide a feedback current from the voltage to current converter to compare with the reference current to produce a control voltage that is input to the control terminal, wherein the control voltage controls the output transistor to produce the feedback current to the voltage to current converter and an output current to the output node.

Claims 18 and 19; prior art fails to disclose or suggest, inter alia, a method of regulating a voltage with current feedback comprising: wherein the step of regulating the voltage by using the error signal to control an output device comprises: running the feedback current through a component having a negative temperature coefficient and a component to compensate for the component with a negative temperature coefficient.

Claims 16, 17, 20 and 21; prior art fails to disclose or suggest, inter alia, a method of regulating a voltage with current feedback comprising: wherein the step of comparing the reference current with the feedback current to produce an error signal comprises: running an error current, which is produced by comparing the reference current with the feedback current, through the impedance of a transistor to produce the error signal.

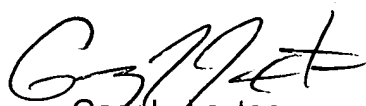
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Laxton whose telephone number is (571) 272-2079. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 11/29/04
Gary L. Laxton
Patent Examiner
Art Unit 2838